

Two New Species of *Sonerila* (Melastomataceae) from South India

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ABSTRACT. The two new species *Sonerila anaimudica* Lundin & B. Nordenstam and *S. coriacea* Lundin & B. Nordenstam, from Kerala and Tamil Nadu, respectively, are recognized in connection with a taxonomic revision of the South Indian species of *Sonerila* Roxburgh (Melastomataceae). Descriptions, discussions, and illustrations are provided. Both species are endemic to the Western Ghats in South India. *Sonerila anaimudica* is a small succulent herb, and the usually single terminal flower has very obtuse or even retuse obovate petals with glandular margins. *Sonerila coriacea* is a somewhat woody succulent herb with a coriaceous layer on the stems, coriaceous leaves, and showy racemose flowers. Both species have restricted distribution and small populations and are regarded as Vulnerable (VU) and Endangered (EN), respectively, based on IUCN Red List criteria.

Key words: IUCN Red List, Melastomataceae, *Sonerila*, South India, Western Ghats.

Sonerila Roxburgh is an Asiatic genus of the Melastomataceae with ca. 175 species of herbs and shrublets all characterized by the trimerous flowers. The genus is well represented in South India, where five species groups were distinguished by Lundin (1998). Two new species of *Sonerila* from South India are described, *S. anaimudica* Lundin & B. Nordenstam, which belongs to the *S. speciosa* Zenker group, and *S. coriacea* Lundin & B. Nordenstam, which belongs to the *S. grandiflora* R. Brown group. The two new species are locally endemic with very limited distribution areas.

After conducting a field trip in southern India in 1982, the first author recognized six new taxa of *Sonerila* on the basis of collected and herbarium material. Material of the South Indian species of *Sonerila* was studied mainly in the herbaria of BM, CAL, K, MH, and S. Subsequently, four of these six new taxa have been described elsewhere, viz. *S. kannanorensis* G. S. Giri & M. P. Nayar (Giri & Nayar, 1985), *S. kanniyakumariana* Gopalan & A. N. Henry (Gopalan & Henry, 1988), *S. talbotii* G. S. Giri & M. P. Nayar (Giri & Nayar, 1986), and *S. parameswaranii* K. Ravikumar & V. Lakshmanan (Ravikumar, 1999). This last-mentioned species

was provisionally recognized in Lundin (1998) as *S. pedicellaris* Lundin ined. (without Latin diagnosis), but because the species was validly published by Ravikumar and Lakshmanan (Ravikumar, 1999), their name, *S. parameswaranii*, must be used.

1. *Sonerila anaimudica* Lundin & B. Nordenstam, sp. nov. TYPE: India. Kerala: Kottayam Distr., Anai Mudi, adjoining hill, 2300 m, 20 Oct. 1982, J. Klackenberg & R. Lundin 429 (holotype, S; isotype, K). Figure 1.

Herba erecta parva; caules basi bulbosi, carnosissimi, simplices, brunneo-virentes, pilis glanduliferis albis vestiti. Folia petiolata; petiolus pilis glanduliferis albis dispersis; lamina ovata cordata carnosae serrulata 5- ad 7-nervis, supra atro-virens pilis glanduliferis albis dispersis, subter rubella glabra vel pilis paucis vestita. Flores solitarii vel in inflorescentiam 2- vel 3-floram pedunculatam dispositi; pedunculus et pedicelli glanduliferi. Petala rosea obovata apicibus retusis. Capsula campanulata pilis dispersis vestita, sepalis tribus viridibus coronata.

Small herb, 1–3.5 cm high, with basally bulb-like stems, succulent; stems unbranched, 3–6 mm thick, terete, brownish green, with whitish glandular hairs. Leaves petiolate; lamina ovate to broadly ovate, fleshy, cordate to deeply cordate with overlapping margins at the base, obtuse with the central nerve extending into the mucronate apex, 0.5–3 × 0.5–2 cm, dark green with scattered white hairs adaxially, reddish green and glabrous abaxially, or with few hairs (especially at the veins), finely serrate, 5- to 7-nerved; petioles 0.5–2.5 cm, greenish and with scattered, whitish glandular hairs. Flowers solitary or in 2- or 3-flowered peduncled subdichotomous scorpioid raceme; peduncles 1–2.5 cm, with whitish glandular hairs, brownish green; pedicels ca. 0.5 cm, bright green, with glandular hairs, with a minute, membranaceous, subulate bract at the base. Petals pink, obovate, with glandular hairs on margins and abaxial veins, ca. 0.7 × 0.7 cm, with rounded or retuse apex; anthers yellow, 0.2–0.3 cm, ovate, cordate at the base, acute at the apex; filaments simple, striate, reddish. Capsule campanulate, with scattered hairs, ca. 0.7 cm, crowned with 3 green persistent sepals.

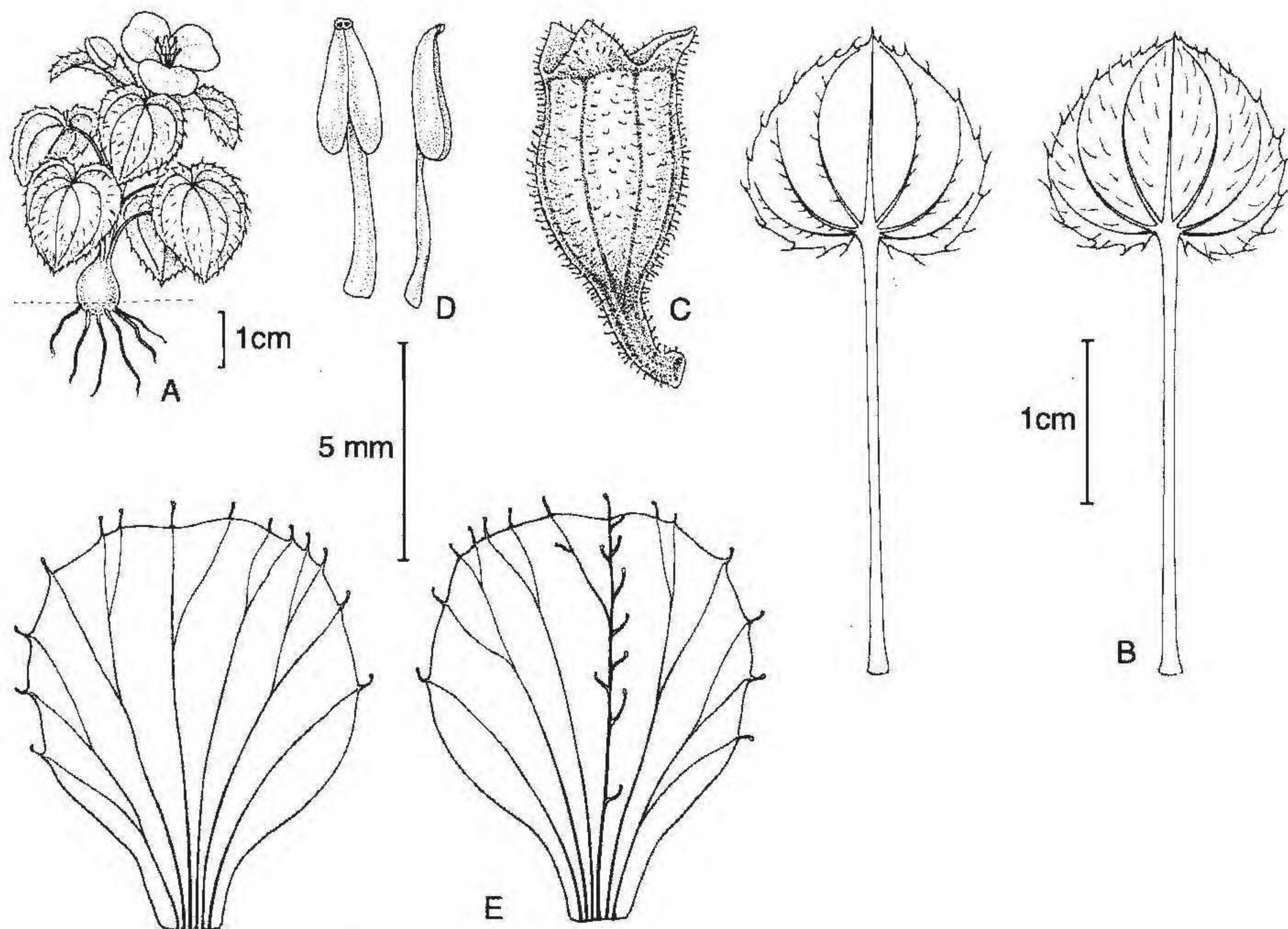


Figure 1. *Sonerila anaimudica* Lundin & B. Nordenstam. —A. Habit. —B. Leaf, abaxial view (left) and adaxial view (right). —C. Capsule. —D. Anther. —E. Petal, adaxial view (left) and abaxial view (right). A, C, E drawn from the type, *Klackenberg & Lundin 429* (S); B, D drawn from *Chandrabose 69018* (K). The 5 mm scale bar applies to C, D, and E.

Discussion. *Sonerila anaimudica* (Fig. 1) is a small, unbranched, very succulent herb with a basally bulbous stem. The stems are sometimes sparsely branched when cultivated in the greenhouse, and extend to 1–5 cm long, opposite branches (cultivated from the type *J. Klackenberg & R. Lundin 429*). The species does not otherwise change its habit during cultivation. The peduncles often have only one terminal flower. The petals are characteristically glandular-pubescent on margins and abaxial veins and are very obtuse or retuse, not pointed as in other species of *Sonerila* in South India. This species is locally endemic and occurs only in the Anaimalais, growing in shaded rock crevices at the adjoining hills to Anai Mudi in the mountain region above 2000 m. Based on the paucity of known localities (two) and the small population size as observed in the field (less than 12 individuals in the type locality), the species may be classified as Vulnerable (VU) according to IUCN Red List criteria (IUCN, 2001).

This new species belongs to the *Sonerila speciosa* group (Lundin, 1998), which now consists of three species, viz. *S. speciosa* Zenker, *S. gamblei* G. S. Giri & M. P. Nayar, and *S. anaimudica*, all confined to the Nilgiris and the Anaimalais of the Western Ghats of South India. The species of this group are characterized by stems with short internodes and leaves almost

whorled, like an elongated rosette, terminated by a distinct peduncle with a few-flowered subdichotomous inflorescence or a solitary flower.

Paratype. INDIA. **Tamil Nadu:** Coimbatore Distr., Konalar, Anamalai Hills, 2150 m, 1980, *Chandrabose 69018* (K, MH).

2. *Sonerila coriacea* Lundin & B. Nordenstam, sp. nov. TYPE: India. Tamil Nadu: Kanyakumari Distr., Mahendragiri Peak, 4500 ft., *R. H. Beddome 3051* (holotype, K). Figure 2.

Herba erecta robusta et sublignosa glabra parce ramosa; caules et rami crassi subteretes, corio crasso rubello obtecti, cicatricibus foliorum delapsorum prominentibus notati. Folia petiolata; lamina ovata usque lanceolata coriacea 5-nervis, basi obtusa usque acuta, apice acuta, marginibus sursum serrata. Inflorescentia pedunculata racemosa 3- ad 6-flora. Petala rubra ovata acuta. Capsula obconica in pedicellum gradatim angustata, sepalis in fructu caducis.

Erect herb, 30–50 cm high, robust and semi-woody, glabrous, younger shoots succulent; stems and branches thick, \pm terete, covered with a thick reddish corium, with prominent leaf scars, sparsely branched. Leaves ovate to lanceolate, extremely coriaceous, green adaxially, reddish green abaxially, 5-nerved, fleshy, obtuse to acute and symmetrical at the base, serrate in the upper 2/3, acute at the apex; lamina 2–5

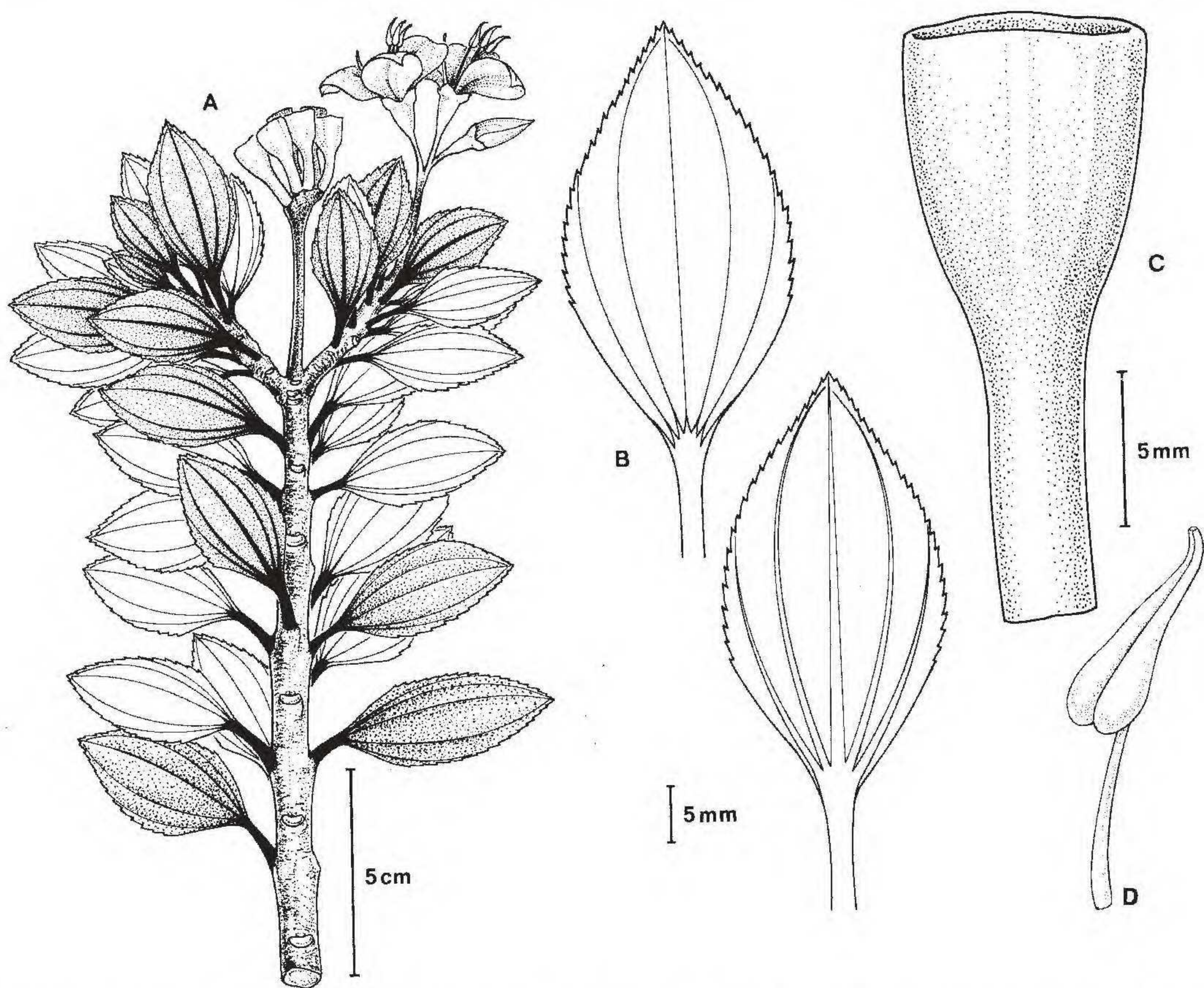


Figure 2. *Sonerila coriacea* Lundin & B. Nordenstam. —A. Habit. —B. Leaf, adaxial view (left) and abaxial view (right). —C. Capsule. —D. Anther. A (p.p.), B, C drawn from the type, *Beddome 3051* (K); A (p.p.), D drawn from *Shetty 33060* (MH). Scale bar at far right applies to C and D.

× 1–2.5 cm; petiole 1/4 the length of the lamina. Flowers showy in 3- to 6-flowered scorpioid racemes; peduncles 2–4.5 cm; petals red, ca. 1.5 cm, ovate, pointed; anthers narrowly ovate, rostrate, ca. 0.7 cm, connective simple. Capsule obconical, glabrous, lusterless (dull), ca. 0.8 cm, tapering into ca. 0.7 cm pedicel; sepals caducous in fruit.

Discussion. Despite its semi-woody coriaceous habit, *Sonerila coriacea* (Fig. 2) belongs to the largely herbaceous succulent *S. grandiflora* group, now consisting of seven montane species from the Nilgiris in the north to the Tinnevelles in the south of India (Lundin, 1998). The species of this group are glabrous and large-flowered with red or purple petals 1.5–2 cm long. The new species much resembles *S. devicolamensis* M. P. Nayar in habit, but is more robust and semi-woody. The plant has developed a characteristic coriaceous layer on the stems and leaves that could be mistaken for a very dense and short tomentum. *Sonerila coriacea* has a very restricted distribution in

the area around Mahendragiri Peak in the Tinnevelley Hills and is locally endemic and rare. Also, no recent collections have been recorded since it was last collected in 1969. Therefore, its conservation status may be classified as Endangered (EN) according to IUCN Red List criteria (IUCN, 2001).

Paratype. INDIA. **Tamil Nadu:** Kanyakumari Distr., Mahendragiri Peak, 1480 m, 6 Dec. 1969, *B. V. Shetty 33060* (MH).

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